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Attorney File Ref: 102790-131 / 30070 US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Christope GALOPIN, et al.  
Serial No.: 10/532514  
Filed: 25.April.2005  
Examiner: Lezah ROBERTS  
Art Group: 1612  
Title: COOLANT COMPOSITIONS AND COMPOSITIONS  
COMPRISING SAME

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PER TELEFAX: (571) 273-8300

Mail Stop: APPEAL BRIEF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313 – 1450

25.October.2010

Dear Sir/Madam;

**APPELLANT'S BRIEF ON APPEAL PURSUANT TO 37 CFR §41.37**

This is an appeal from the final rejection of claims 1 – 18 in the present application.

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**(1) Real Party in Interest:**

The real part in interest in the present application is the assignee, Givaudan SA, by virtue of the Assignment recorded in the US Patent and Trademark Office on 05/09/2005, at Reel/Frame 016203/0607.

**(2) Related Appeals and Interferences:**

There are no related appeals or interferences.

**(3) Status of the Claims:**

The original application was filed as a National Stage patent application based on PCT/CH2003/00703 which included claims 1-13, which was filed with a Preliminary Amendment dated 04/25/2005 in which claims 1, 4-5, 7, 9-12 were amended, and in which new claims 14- 18 were added. In response to an Office Action (Restriction Requirement) dated 04/04/2009, the applicants elected (with traverse) claims 1 – 10, 12, and 14-18 for further prosecution. The Examiner thereafter issued an Office Action dated 09/09/2009, and in a responsive Amendment dated 01/05/2010, the applicants amended claims 5-6, 13, 16-17. The Examiner issued a Office Action (Final Rejection) dated 04/29/2010 rejecting all of claims 1 – 18 in the application.

**(4) Status of Amendments:**

In response to the Office Action (Final Rejection) dated 04/29/2010, the applicants filed a Notice of Appeal on 08/30/2010. There are no unentered or pending amendments to the claims.

**(5) Summary of the Claimed Subject Matter:**

There are four independent claims, namely claims 1, 6, 12, and 13.

Claim 1 is directed to a method of preparing a solution of menthyl lactate, wherein the final concentration of menthyl lactate is higher than that achievable by dissolving menthyl lactate in a neat solvent, (page 2, lines 9 – 11) by the steps

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of: liquefying menthyl lactate; (page 2, line 12) and, combining the liquefied menthyl lactate with menthol carboxamide and the solvent (page 2, lines 13 – 14). Examples of neat solvents include those useful in food, oral care and cosmetic applications (page 2, line 32 – page 3, line 9).

Claims 2 – 5, 7 – 11 and 14 – 17 depend either directly, or indirectly, on claim 1.

Claim 6 is directed to solution consisting of menthyl lactate and menthol carboxamide dissolved in a solvent, characterized in that the final concentration of menthyl lactate is higher than that achievable by dissolving menthyl lactate alone in the solvent (page 2, lines 9 – 11).

Claim 18 depends directly from claim 6.

Claim 12 is directed to a method of improving the solubility of menthyl lactate comprising the steps of: liquefying menthyl lactate; and combining the liquefied menthyl lactate with menthol carboxamide and the solvent (page 4, lines 28 – 30).

Claim 13 is directed to a solution consisting of menthyl lactate and menthol carboxamide dissolved in a solvent (page 2, lines 14 – 19)

**(6) Grounds of Rejection to be Reviewed on Appeal:**

I. The rejection of claims 1-18 under 35 USC 103(a) as allegedly being unpatentable over WO 99/13734 to Wolf, in view of the published reference of: H&R, Frescolat Cooling Ingredients, 1999.

**(7) Argument:**

I. The rejection of claims 1-18 under 35 USC 103(a) as allegedly being unpatentable over WO 99/13734 to Wolf, in view of the published reference of: H&R, Frescolat Cooling Ingredients, 1999.

A. The inventors reference to Wolf does not suggest or render obvious the subject matter of the claims, and the Examiner's reliance upon the H&R reference does not cure the shortcomings of Wolf.

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The subject matter of the independent claims all require either (a) a method which requires the specific combination of a liquefied menthyl lactate in conjunction with, specifically, menthol carboxamide further with a solvent, or (b) a solution formed according to the said method.

Although Wolf discloses ingestible chewing gum compositions which may be provided with 5% to 30% cooling agents (Wolf, page 25, lines 8 – 18) which may be first provided in aqueous or alcohol carriers which are then used to spray powders, nowhere does Wolf specifically disclose either (a) the specific combination of a menthol carboxamide and menthyl lactate in a solvent as defined by the applicant, or (b) to form a solution having a higher concentration of menthyl lactate in a solvent than could be achieved in the exclusion of menthol carboxamide, by combining melted menthyl lactate with menthol carboxamide and the solvent.

Wolf teaches that his compositions menthol and menthone are used in their separated, or pure form, as apart from their form as found in peppermint oil (Wolf, page. 20, lines 25 – 29) which a used in conjunction with at least one further physiological cooling agents such as: menthyl succinate, menthyl lactate, 3-l-menthoxypropane-1,2-diol; menthone glycerol ketals, N-substituted p-menthane carboxamide; acyclic carboxamide and mixtures thereof. Preferred physiological cooling agents are menthyl succinate, N-substituted p-menthane carboxamide (WS-3), acyclic carboxamide (WS-23) and menthyl lactate. (Wolf, page 21, lines 3 – 9). While Wolf teaches that at least one cooling agent is present, Wolf fails to identify solutions specifically containing (or consisting of) menthol carboxamide and menthyl lactate in a non-aqueous solvent, or such specific solutions yield higher solution concentrations of the menthyl lactate in the solvent due to the presence of the menthol carboxamide than could otherwise be attained. Nothing in Wolf illustrates this specific composition, and nothing in Wolf would suggest that improved solubility could be attained upon first melting the menthyl lactate before combining it with the solvent and the menthol carboxamide. Rather Wolf teaches only pure forms of menthol and/or menthone in their pure forms in a solvent, to which may be added one of a number of further physiological cooling agents. Invariably in Wolf's

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compositions comprising any of the physiological cooling agents would necessarily also be present a pure form of menthol and/or menthone.

Further, Wolf discloses that water is generally used as the solvent (see page 25, lines 13-14). Menthol carboxamide is insoluble in water. Thus, in view of the fact that menthol carboxamide is insoluble in water, it is submitted that a skilled artisan would also recognize that Wolf's statements at page 25 would not be applicable for all cooling agents.

Reliance upon the H&R reference does not cure the shortcomings of Wolf, nor render the currently claimed invention as being obvious these combined references. Nor would the additional consideration of H&R with Wolf either (a) combining a menthol carboxamide and menthyl lactate in a solvent as defined by the applicant and as now claimed, or (b) to form a solution having a higher concentration of menthyl lactate in a solvent than could be achieved in the exclusion of menthol carboxamide, by combining melted menthyl lactate with menthol carboxamide and the solvent. The H&R reference only discloses two options for using Frescolat ML (menthyl lactate), which is solid, soluble in oil, whereby neither option teaches or suggests the presently claimed method. In the first option, H&R discloses that the menthyl lactate is melted at a temperature of around 50 – 60°C resulting in a liquid, and that is subsequently added to emulsions at a temperature of around 40 – 45°C. In the second option, H&R discloses that the menthyl lactate is dissolved in perfume oils, cosmetic oils or glycol solvents. Nowhere does H&R teach or suggest that the Frescolat ML is first melted and then the melted Frescolat ML is subsequently added to a solvent. Nowhere in Wolf or in H&R exists a teaching as to any benefits, viz., increased solubility of methyl lactate, when it is melted and included in the presence of menthol carboxamide in a solvent, and as such there would be no motivation to produce the specific combination of materials, and/or motivation of the specific process steps to produce a composition as is now claimed. Nothing in the cited references provides any teaching or suggestion, or for that matter hints as to the benefits obtained from specific composition comprising menthyl lactate and menthol carboxamide (WS-3) when formed by the manner outlined in the applicants claimed method.

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Nor would it be reasonable to presume that specific combination of menthyl lactate and menthol carboxamide (WS-3) in a solvent when formed by the manner outlined in the applicants claimed method would lead to a more concentrated solution nor form a eutectic mixture as the Office has suggested. Eutectic mixtures (e.g. as disclosed in US 2004/0018954 to Su) be obvious either from H&R or from Wolf. As disclosed in that document cited by the Examiner, eutectic mixtures are combination of two components in such proportions such that the a depression of melting points of the combined materials are attained. In the Su reference, menthol and menthyl lactate are combined in ratios of 1:4 – 4:1 which is observed to depress the crystallization temperature to below 25°C. Su uses no solvents, but mixes his menthol and menthyl lactate into surfactants solvents to form his eutectic mixtures (Su, col. 4, lines 50 – 54) which are liquids at room temperatures. However, Su's systems are limited to specific combinations of menthol and menthyl lactate in surfactants. Su is of little relevance to combination of menthyl lactate and menthol carboxamide in solvents, and even if the principle of "eutectic mixtures" from Su were considered by an artisan, nothing Wolf or H&R would provide any means whereby a skilled artisan would be provided with an appropriate motivation to produce the currently claimed compositions, or to practice the currently claimed methods in order to obtained increased solubility of menthyl lactate in a solvent by adding menthol carboxamide to produce such improved solubility. Su's depression of melting points for a different system of materials provides no motivation to provide the current claimed compositions or the currently claimed methods.

The presently claimed method is a novel and patentable method for providing a solution comprising a much higher amount of menthyl lactate than that achievable by dissolving menthyl lactate in a neat solvent. Such solution having a much higher amount of menthyl lactate is achievable by first melting menthyl lactate and then combining the liquefied menthyl lactate with menthol carboxamide and a solvent. The resultant compositions produced by this method are also novel and patentable as well.

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**(8) Conclusion:**

In view of the foregoing, the applicants respectfully request that the Board reverse the Examiner's final rejection, and grant the presently amended claims to issue in US Letters Patent.

**CONDITIONAL AUTHORIZATION FOR FEES**

Should any further fee be required by the Commissioner in order to permit the timely entry of this paper, the Commissioner is authorized to charge any such fee to Deposit Account No. 14-1263.

Respectfully Submitted;

  
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25. October. 2010  
Date:

**CERTIFICATION OF TELEFAX TRANSMISSION:**

I hereby certify that this paper and any indicated enclosures thereto is being telefax transmitted to the US Patent and Trademark Office to telefax number: 571-273-8300 on the date shown below:

  
Allyson Ross

25. Oct. 2010  
Date

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**(9) Claims Appendix:**

- 1.(previously presented) A method of preparing a solution of menthyl lactate, wherein the final concentration of menthyl lactate is higher than that achievable by dissolving menthyl lactate in a neat solvent, by:  
liquefying menthyl lactate; and  
combining the liquefied menthyl lactate with menthol carboxamide and the solvent.
- 2.(original) A method according to claim 1, in which the menthol carboxamide is added to the liquefied menthyl lactate and this liquid mixture is then dissolved in the solvent.
- 3.(original) A method according to claim 1, in which the menthol carboxamide is first dissolved in the solvent, and this solution is then mixed with the liquefied menthyl lactate.
- 4.(previously presented) A method according to claim 1, wherein the solvent is selected from the group consisting of octyldodecanol, dipropylene glycol, propylene glycol, triglyceride, isopropyl myristate, olive oil, almond oil, hexyl laurate and alcohol.
- 5.(previously presented) A solution prepared by the method of claim 1, consisting of menthyl lactate and menthol carboxamide dissolved in a solvent.
- 6.(previously presented) A solution consisting of menthyl lactate and menthol carboxamide dissolved in a solvent, characterized in that the final concentration of menthyl lactate is higher than that achievable by dissolving menthyl lactate alone in the solvent.



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- 7.(previously presented) A solution according to claim 5 wherein the solvent is propylene glycol.
- 8.(original) A solution according to claim 7 wherein the propylene glycol is present in amounts of 25% to 30% by weight of the total solution.
- 9.(previously presented) A solution according to claim 5 wherein the menthyl lactate is present in amounts of from 50% to 60% by weight of the total solution.
- 10.(previously presented) A solution according to claim 5 wherein the menthol carboxamide is present in amounts of from 10% to 20% by weight of the total solution.
- 11.(previously presented) A food or oral care or cosmetic composition comprising a solution according to claim 5.
- 12.(previously presented) A method of improving the solubility of menthyl lactate comprising the steps of:  
liquefying menthyl lactate; and  
combining the liquefied menthyl lactate with menthol carboxamide and the solvent.
- 13.(previously presented) A solution consisting of menthyl lactate and menthol carboxamide dissolved in a solvent.
- 14.(previously presented) A method according to claim 2 wherein the solvent is selected from the group consisting of octyldodecanol, dipropylene glycol, propylene glycol, triglyceride, isopropyl myristate, olive oil, almond oil, hexyl laurate and alcohol.

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- 15.(previously presented) A method according to claim 3 wherein the solvent is selected from the group consisting of octyldodecanol, dipropylene glycol, propylene glycol, triglyceride, isopropyl myristate, olive oil, almond oil, hexyl laurate and alcohol.
- 16.(previously presented) A solution prepared by the method of claim 2, consisting of menthyl lactate and menthol carboxamide dissolved in a solvent.
- 17.(previously presented) A solution prepared by the method of claim 3, consisting of menthyl lactate and menthol carboxamide dissolved in a solvent.
- 18.(previously presented) A solution according to claim 6 wherein the solvent is propylene glycol.

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**(10) Evidence Appendix:**

None.

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**(11) Related Proceedings Appendix:**

None.